

Testimony Submitted to  
United State Senate  
Committee on Energy and Natural Resources  
by  
Advanced Energy Management Alliance

Chairman Murkowski, Ranking Member Cantwell, and members of the Committee, thank you for the opportunity to submit written testimony for the record regarding numerous bills related to energy efficiency, infrastructure, and supply that together can create a vision for and guide our nation's overarching energy policy in the coming years. The Advanced Energy Management Alliance ("AEMA")<sup>1</sup> applauds this effort and looks forward to serving as a resource as a final bipartisan bill is crafted.

AEMA is an association of demand response providers of commercial, industrial, and residential services; consumers that use demand response and advanced energy management tools to reduce the cost of energy; and organizations that provide services and choices to these consumers and providers. Our members are united in an effort to overcome barriers to nationwide use of demand response and other energy management technologies for a more efficient, reliable, and resilient grid.

While our electric grid is considered an engineering marvel, new technologies, applications and business models are changing the way it operates and the manner in which consumers interact with the system. Given the increasing demand for electricity, public policy must allow for innovative applications and technologies to become part of the grid infrastructure

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<sup>1</sup> Advanced Energy Management Alliance website: <http://aem-alliance.org>

in ways that do not compromise the system, but instead provide additional resources. Many of the legislative proposals move toward that goal.

AEMA supports many of the bills introduced by Members on both sides of the aisle. In particular, we support bills that call for grid modernization, such as S. 1207, for transformative grid innovation; S. 1232, the Smart Grid Act of 2015; and S. 1243, the Grid Modernization Act of 2015. Demand response and advanced energy management will be key elements in a smarter grid that can enhance consumer choice while preventing increased customer expense. Allowing for utilities to invest in technologies and applications that provide more flexible solutions will be important to assuring that their business models can evolve and remain robust. We also support including demand response as part of the menu of distributed energy resources states should consider, as in S. 1213, Free Market Energy Act and S. 1201, Clean Distributed Energy Integration Act.

AEMA believes that, with increasingly smarter grid communication and control technologies, the distribution side of the grid can increasingly provide resources that balance the supply side in real time. AEMA agrees with the goals of S. 1044, Access to Consumer Energy Information (E-Access) Act, that would allow for access to energy data by consumers and authorized third parties, spurring innovation in advanced energy products and enabling more informed choices on energy use. We are generally supportive of programs that incentivize energy efficiency—as in S. 523 for school retrofits, S. 600 for non-profit retrofits, S. 720 for strengthened federal energy efficiency, S. 1346 for innovation to reduce energy cost in high heating cost regions—assuming that demand response and advanced energy management are able to participate in those programs. AEMA also supports efforts to increase system resilience

as in S. 888 to encourage regional resilience partnerships and S. 1227 to encourage microgrid development in remote communities. S. 1258, Local Energy Supply and Resiliency Act of 2015, would provide technical assistance and grants to entities considering deployment of demand response and other advanced energy management programs. All of these bills represent varying ways in which innovation can participate to improve and modernize our grid—through local incentives, state regulatory guidance, and bulk power market policies.

AEMA would draw attention to S. 1222, the Continuity of Electric Capacity Resources Act which defines “electric capacity resource” as “an electric generating resource, as measured by the maximum load-carrying ability of the resource, exclusive of station use and planned, unplanned, or other outage or derating.” Based on the current capacity market and operational evidence in organized and regional transmission systems, “electric capacity resource” should have a far broader definition to include any flexible resource (like demand response and other advanced energy management tools such as energy efficiency, distributed generation and storage) that can commit to providing capacity when called upon.

A stark example of such a response was during the 2014 Polar Vortex when demand response was able to supply critical resources to PJM that stabilized the grid at a time when many generators were unavailable. These events demonstrated that rather than investing in additional generation, enabling flexible resources—in this case, demand response—could ensure continued reliability and cost-effectiveness.

In a report titled “Analysis of Operational Events and Market Impacts During the January 2014 Cold Weather Events”<sup>2</sup>, PJM Interconnection asserted that, while the electric grid was stressed during the Polar Vortex, demand response played an important role in maintaining the reliability of the system. During the Polar Vortex, PJM called on demand response three times – the morning and evening of January 7 and the morning of January 8 throughout the Regional

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<sup>2</sup> Report dated May 8, 2014: <http://www.pjm.com/documents/reports.aspx>, report can be downloaded [here](#).

Transmission Organization (“RTO”). The report states that, “demand response, although not required to participate during the winter this year, responded each time it was called upon.” In fact, the report confirmed that demand response “exceeded PJM’s expectations in real time.” AEMA believes that this experience demonstrates the value of demand response as a fast-acting, responsive resource that can help independent system operators and electric utilities maintain grid reliability.

Limiting capacity markets to traditional generation resources would essentially remove the ability of flexible resources like demand response to be called upon to respond. In addition, customers would be limited in their ability to save; demand response and energy efficiency have lowered consumer energy costs in PJM by \$16 billion, based on the State of the Market 2014.<sup>3</sup> In the 2017/2018 auction, demand response is estimated to be the majority of the customer savings from efficiency and demand response combined--close to \$9.3 billion.<sup>4</sup>

In summary, AEMA is in agreement that the Committee should continue to develop bipartisan legislation that moves our electric grid into the future, spurring continued innovation to reduce cost, increase reliability and resilience, and allow for consumer engagement and choice. Including demand response and advanced energy management solutions as part of that smarter grid will provide the appropriate tools for local, state and regional entities to take full advantage of technologies and applications and make that 21<sup>st</sup> century grid a reality.

We look forward to addressing any questions the Committee has about AEMA, demand response, and advanced energy solutions more generally. Thank you for the opportunity to submit this testimony.

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<sup>3</sup> PJM Market Monitor, State of the Market 2014,

[http://www.monitoringanalytics.com/reports/pjm\\_state\\_of\\_the\\_market/2014/2014q2-som-pjm.pdf](http://www.monitoringanalytics.com/reports/pjm_state_of_the_market/2014/2014q2-som-pjm.pdf)

<sup>4</sup> *Analysis of the 2017/2018 RPM Base Residual Auction*, Marketing Analytics, October 6, 2014, page 6:

[http://www.monitoringanalytics.com/reports/Reports/2014/IMM\\_Analysis\\_of\\_the\\_2017\\_2018\\_RPM\\_Base\\_Residual\\_Auction\\_20141006.pdf](http://www.monitoringanalytics.com/reports/Reports/2014/IMM_Analysis_of_the_2017_2018_RPM_Base_Residual_Auction_20141006.pdf)

Respectfully submitted by,

A handwritten signature in black ink, appearing to read "Katherine Hamilton". The signature is fluid and cursive, with a long horizontal flourish at the end.

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